REMARKS

The Office Action mailed September 26, 2006 has been carefully considered. Within the Office Action Claims 53, 55, 56, 61, 66, and 69-101 have been rejected. The Applicant has amended Claims 53, 55, 56, 61, 66, 69, 71-73, 75-83, 85, 86, 88-90, 92, 93, 95-97, 100 and 101. Reconsideration in view of the amendments above and following remarks is respectfully requested. Applicants have included a two month extension fee as well a Request for Continued Examination.

Information Disclosure Statement

It was stated in a previous Office Action that certain prior art documents were not considered, because paper copies of these documents were not supplied by Applicants. The Applicants have provided copies of the documents with this response along with a copy of the Information Disclosure Statement 1449 originally filed July 27, 2004. Applicants respectfully request consideration of the prior art references.

The 35 U.S.C. § 101 Rejection

Claims 53, 55, 56, 61, 66, and 69-101 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. This rejection is respectfully traversed.

The Office Action states that the claims fail to claim a real world application of the claimed filtering is not present in the claims. In particular, it is stated in the Office Action that Claims 53, 55, 56, and 61 include a phrase, "reduce visual disturbance to a user controlled graphical object displayed in an associated graphical environment" does not provide sufficient

real world application for the phrase, "filtering sensor data" because the claimed term "displayed" is defined to be other things than visually displayed on the screen. The Applicants strongly disagree.

The Examiner refers to the *Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility* (hereinafter "Guidelines") as support for the rejection that filtering sensor data is not provided real world application with respect to reduced visual disturbance to the graphical object in the graphical environment. However, upon closer read of the Guidelines, it is stated therein that the standard in determining patentability should be whether the claim provides a practical application that produces a useful, tangible, and concrete result. (Guidelines, Page 20, Lines 5-7). In addition, in determining whether the claim is for a practical application, the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed subject matter is useful, tangible and concrete. (Guidelines, Page 20, Lines 8-11). In other words, if the claim produces a result that is tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirements of 35 USC 101. (Guidelines, Page 20, Lines 12-15).

The Applicants' specification describes that a problem with prior art force feedback interfaces is that certain force sensations imposed by the actuator on the user controlled haptic device cause a graphical object to move in undesired ways. For example, a vibration sensation imposed on a cursor control interface may cause the haptic device to shake. This, in turn, causes the graphical object (for example, a cursor) to shake or "jitter" on the screen because the cursor position is based on sensor readings describing the position of the user object. Such vibrations may cause the user difficulty in positioning the graphical object at a desired position or "target" in the graphical user interface. In another situation, a turbulence sensation imposed on a joystick

interface during a flight simulation game may cause the user object to shake, which in turn makes the airplane fly erratically since the airplane trajectory is based on locative signals derived from the position or motion of the user object. These undesired displayed effects can be referred to as "disturbances" due to their interfering effect on the position of a controlled graphical object or entity. (Applicants' Specification, Background). Applicants describe inventive embodiments in the specification which solve this problem by utilizing filtering technology to reduce the visual disturbance caused by the haptic feedback forces output from the haptic feedback device so that the user does not have to read just the location of the graphical object when the haptic forces are output.

Amended Claim 53 recites receiving a haptic-feedback signal at a haptic-feedback device to output a haptic feedback force, the haptic-feedback device configured to provide input data to control a graphical object in a graphical environment shown on a display screen; and filtering the input data based on the haptic-feedback signal to reduce visual disturbance of the graphical object in the graphical environment when the haptic-feedback device outputs the haptic feedback force. The embodiment recited in Claim 53 thus filters the haptic feedback signal to effectively come to the result of reducing the visual disturbance of the graphical object shown on the display screen (emphasis added). In other words, the filtering process reduces the amount of visual disturbance that the user sees of the graphical object when a haptic force is output on the haptic feedback device. Accordingly, the user experiences a useful, tangible and concrete result, as recommended in the Guidelines, and Claim 53 therefore meets the statutory requirement of 35 USC 101. For at least these reasons, the rejection must be withdrawn.

Amended Claim 55 recites receiving a haptic-feedback signal at a haptic-feedback device, wherein the haptic-feedback device outputs a haptic feedback force upon receiving the haptic-feedback signal; and filtering input data from the haptic-feedback device upon the haptic-

feedback device receiving the haptic-feedback signal by time-averaging the input data to create filtered input data, wherein the haptic-feedback device provides the filtered input data to control a graphical object with reduced visual disturbance in a graphical environment shown on a display screen. The embodiment recited in Claim 55 thus filters the haptic feedback signal to effectively come to the result of reducing the visual disturbance of the graphical object that displayed (emphasis added). In other words, the filtering process reduces the amount of visual disturbance that the user sees of the graphical object when a haptic force is output on the haptic feedback device. Accordingly, the user experiences a useful, tangible and concrete result, as recommended in the Guidelines, and Claim 55 therefore meets the statutory requirement of 35 USC 101. For at least these reasons, the rejection must be withdrawn.

Amended Claim 56 recites receiving a haptic-feedback signal at a haptic-feedback device to output a haptic feedback force, the haptic-feedback device configured to provide input data to control a graphical object in a graphical environment shown on a display screen; and filtering the input data to produce a held data value, the filtering including sampling and holding data based on a movement of the haptic-feedback device without the output of the haptic feedback force to reduce visual disturbance of the graphical object in the graphical environment when the haptic feedback device outputs the haptic feedback force. The embodiment recited in Claim 56 thus filters the haptic feedback signal to effectively come to the result of reducing the visual disturbance of the graphical object shown on a display (emphasis added). In other words, the filtering process reduces the amount of visual disturbance that the user sees of the graphical object when a haptic force is output on the haptic feedback device. Accordingly, the user experiences a useful, tangible and concrete result, as recommended in the Guidelines, and Claim 56 therefore meets the statutory requirement of 35 USC 101. For at least these reasons, the rejection must be withdrawn.

Amended Claim 61 recites receiving a haptic-feedback signal at a haptic-feedback device; outputting a haptic-feedback force from the haptic-feedback device based on the haptic-feedback signal; generating sensor data in response to sensing movement of the haptic feedback device; filtering sensor data according to a disturbance filter process including time-averaging the sensor data, the disturbance filter process being associated with the haptic feedback signal, wherein filtering the sensor data is configured to reduce disturbance to a graphical object in a graphical environment shown on a display screen when the haptic feedback device outputs the haptic feedback force; and updating the graphical environment based on the input data. The embodiment recited in Claim 61 thus filters the haptic feedback signal to effectively come to the result of reducing the visual disturbance of the graphical object that displayed (emphasis added). In other words, the filtering process reduces the amount of visual disturbance that the user sees of the graphical object when a haptic force is output on the haptic feedback device. Accordingly, the user experiences a useful, tangible and concrete result, as recommended in the Guidelines, and Claim 61 therefore meets the statutory requirement of 35 USC 101. For at least these reasons, the rejection must be withdrawn.

Amended Claim 66 recites an apparatus comprising an actuator coupled to a haptic feedback device, the actuator configured to receive a haptic-feedback signal to produce a haptic feedback force; a sensor coupled to the actuator, the sensor configured to detect a movement of the haptic feedback device and output sensor data associated with the movement; and a filter configured to receive sensor data and to provide input data based on the haptic-feedback signal to control a graphical object in a graphical environment shown on a display screen with reduced visual disturbance of the graphical object when the haptic feedback device outputs the haptic feedback force. The embodiment recited in Claim 66 thus filters the haptic feedback signal to effectively come to the result of reducing the visual disturbance of the graphical object that

displayed (emphasis added). In other words, the filtering process reduces the amount of visual disturbance that the user sees of the graphical object when a haptic force is output on the haptic feedback device. Accordingly, the user experiences a useful, tangible and concrete result, as recommended in the Guidelines, and Claim 66 therefore meets the statutory requirement of 35 USC 101. For at least these reasons, the rejection must be withdrawn.

Claims 69-101 all depend on Claims 53, 55, 56, 61 and 66. As stated above, Claims 53, 55, 56, 61 and 66 overcome the rejection and are allowable. Therefore, Claims 69-101 are also allowable.

The 35 U.S.C. § 112 First Paragraph Rejection

Claims 53, 55, 56, and 69-92 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. This rejection is respectfully traversed. However, the Applicants have amended the claim to remove the subject matter at issue with respect to this rejection. Accordingly, the rejection is now moot and should be withdrawn.

The 35 U.S.C. § 112 Second Paragraph Rejection

Claims 53, 55, 56, 61, 66, and 69-101 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention. This rejection is respectfully traversed.

The Applicants have amended Claims 53, 55, 56, 61 and 66 to recite that the graphical object is in a graphical environment shown on a display screen. This is supported on Page 10 Lines 3-12 of Applicants' specification. Accordingly, the rejection is overcome and Claims 53, 55, 56, 61, 66 and 69-101 are allowable.

Request for Allowance

In view of the foregoing, reconsideration and an early allowance of this application are earnestly solicited.

If any matters remain which could be resolved in a telephone interview between the Examiner and the undersigned, the Examiner is invited to call the undersigned to expedite resolution of any such matters. Please charge any additional required fee or credit any overpayment not otherwise paid or credited to our deposit account No. 50-1698.

Respectfully submitted,

Dated: 2/26/07

Suvashis Bhattacharya
Reg. No. 46,554

Thelen Reid Brown Raysman & Steiner LLP
P.O. Box 640640
San Jose, CA 95164-0640
Tel. (408) 292-5800
Fax (408) 287-8040